

CLAIMS

I claim:

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1. A label structure having a first axis extending substantially parallel to the longitudinal extent of a liner, the label structure having first and second sides extending substantially parallel to the first axis, the label structure comprising:

a base panel for affixing to a surface, the base panel having front and back faces, the back face of the base panel having an adhesive applied thereon;

a first leaflet being positioned adjacent to the front face of the base panel, the first leaflet comprising a first folded panel with a first fold extending substantially parallel to the first axis of the label structure;

a second leaflet being positioned forward of the first leaflet such that at least a portion of the first leaflet is positioned between the second leaflet and the base panel, the second leaflet comprising a second folded panel having a second fold extending substantially parallel to the first axis of the label structure; and

a laminating layer overlying the base panel, the first leaflet, and the second leaflet, the laminating layer having a back face being adhered to a portion of the base panel.

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2. The label structure of claim 1 wherein the first fold is positioned toward the first side, and the second fold is positioned toward the second side of the label structure relative to a position of the first fold.

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3. The label structure of claim 2 wherein the back face of the

laminating layer is adhered to a portion of the first leaflet and a portion of the second leaflet.

102 4. The label structure of claim 1 wherein the first fold in the first folded panel defines a first fold axis and the second fold in the second folded panel defining a second fold axis, the first fold axis being oriented substantially parallel to the second fold axis, the first and second fold axes being oriented substantially parallel to the first axis.

102 5. The label structure of claim 4 wherein the first fold axis is transversely spaced from the second fold axis such that the first fold axis of the first leaflet is located relatively closer to the first side of the label structure than the second fold axis of the second leaflet.

103 6. The label structure of claim 5 wherein the back face of the laminating layer is adhered to a portion of the first leaflet and a portion of the second leaflet.

102 7. The label structure of claim 1 wherein the laminating layer is substantially transparent.

103 8. The label structure of claim 1 wherein the front face of the base panel has first and second areas, indicia being marked on the first area of the front face of the base panel, indicia being marked on the second area of the front face of the base panel, the first and second leaflets being positioned in front of the second area of the front face.

102 9. The label structure of claim 1 wherein the first fold divides the first folded panel into a pair of first leaves, each of the

first leaves having an inner page face and an outer page face, the second fold dividing the second folded panel into a pair of second leaves, each of the second leaves having an inner page face and an outer page face.

103 10. The label structure of claim 9 wherein the inner page faces of the first leaves are oriented inwardly toward each other and the outer page faces of the first leaves are oriented outwardly away from each other, the pair of first leaves comprising a front first leaf and a back first leaf, the outer page face of the back first leaf being oriented toward the front face of the base panel, the outer page face of the back first leaf being positioned adjacent to the front face of the base panel, the outer page face of the back first leaf being positioned adjacent to the second area of the front face of the base panel, each of the inner and outer page faces of the front first leaf and the back first leaf being adapted for permitting viewing of indicia marked thereon, the inner page faces of the second leaves being oriented inwardly toward each other and the outer page faces of the second leaves being oriented outwardly away from each other, the pair of second leaves comprising a front second leaf and a back second leaf, [the outer page face of the back second leaf being oriented toward the outer page face of the front first leaf, each of the inner and outer page faces of the front second leaf and the back second leaf being adapted for permitting viewing of indicia marked thereon.

11. A method of forming a label structure having a plurality of panels, each of the panels being folded to formed a pair of leaves, each of the leaves having opposite page faces, the method comprising:
providing a label structure forming apparatus having a longitudinal

extent, the label structure forming apparatus defining a base panel web path, a first leaflet web path, a second leaflet web path, and a laminating layer web path;
providing label structure components including a base panel web, a liner web adhered to a back face of the base panel web, a first leaflet web, a second leaflet web, and a laminating layer web;
feeding the base panel web onto the base panel web path of the label structure forming apparatus;
feeding the first leaflet web onto the first leaflet web path of the label structure forming apparatus;
feeding the second leaflet web onto the second leaflet web path of the label structure forming path;
folding the first leaflet web to form a first fold in the first leaflet web;
folding the second leaflet web to form a second fold in the second leaflet web;
positioning the first leaflet web adjacent to a first side of the base panel web, locating the first fold of the first leaflet web at a first predetermined distance from a first side of the base panel web; and
positioning the second leaflet web adjacent to a first side of the base panel web such that a portion of the first leaflet web is positioned between the second leaflet web and the base panel web, locating the second fold of the second leaflet web at a second predetermined distance from the first side of the base panel web, wherein the first predetermined distance is less than the second predetermined distance such that the first fold line being transversely spaced from the second fold line.

12. The method of claim 11 additionally comprising uniting the base panel web, the first leaflet web, and the second leaflet web

together to forming a unified web, and applying the laminating layer web to the unified web to form a composite web.

13. The method of claim 12 wherein the step of applying comprises adhering a back face of the laminating layer web to the unified web of the base panel web, the first leaflet web, and the second leaflet web.

14. The method of claim 12 additionally comprising passing the composite web between nip and base rolls.

15. The method of claim 11 additionally comprising trimming portions of the laminating layer web, the base panel web, the first leaflet web, and the second leaflet web from the liner web to form a discrete label structure on the liner web.

16. The method of claim 11 additionally comprising printing a first one of the inner and outer page faces of the first leaflet web, inverting the first leaflet web, and printing a second one of the inner and outer page faces of the first leaflet web.

17. The method of claim 16 additionally comprising printing a first one of the inner and outer page faces of the second leaflet web, inverting the second leaflet web, and printing a second one of the inner and outer page faces of the second leaflet web.

18. A label structure forming apparatus for forming a label structure, the apparatus having a longitudinal extent along which a base panel web path, a first leaflet web path, a second leaflet web path, and a laminating layer web path extend, the apparatus comprising:
a base panel feed stage for feeding a base panel web onto the base

panel web path of the label structure forming apparatus, the base panel feed stage being adapted to feed a liner web removably adhered to the base panel web;

a first leaflet feed stage for feeding a first leaflet web onto the first leaflet web path of the label structure forming apparatus, the first leaflet feed stage being positioned in line with the base panel feed stage along the longitudinal extent of the label structure forming apparatus;

a second leaflet feed stage for feeding a web of a second leaflet onto the second leaflet web path of the label forming apparatus, the second leaflet feed stage being positioned in line with the base panel feed stage along the longitudinal extent of the label forming apparatus;

a folding stage for placing a fold in each of the leaflet webs, the folding stage being adapted to form a first fold in the first leaflet web, the folding stage being adapted to form a second fold in the second leaflet;

a uniting stage for uniting the base panel web, the first leaflet web, and the second leaflet web into a unified web, the base panel web path, the first leaflet web path, and the second leaflet web path converging together at the uniting stage to form a unified web moving along the unified web path;

a laminating layer feed stage for feeding a laminating layer web along a laminating layer web path, the laminating layer feed stage being positioned above the unified web path;

a laminating stage for applying the laminating layer web to the unified web, the laminating stage including a nip roll and a first base roll, the nip roll being biased toward the first base roll, the unified web path and the laminating layer web path passing between the nip roll and the first base roll for

pressing the laminating layer web and the unified web together into a composite web moving along a composite web path.

19. The apparatus of claim 18 wherein each of the web paths is oriented in a common vertical plane.

20. The apparatus of claim 18 wherein the second leaflet web path is located above the first leaflet web path, and wherein the first leaflet web path is located above the base panel web path.

21. The apparatus of claim 18 wherein the first leaflet feed stage is located above the base panel web path and the second leaflet feed stage is located above the base panel web path.

22. The apparatus of claim 18 additionally comprising a first leaflet printing stage for printing on the first leaflet web, the first leaflet printing stage including at least a pair of printing sections with each printing section being adapted to print on one of a pair of opposite page faces of the first leaflet web, and additionally comprising a first leaflet inverting stage for inverting the first leaflet web moving along the first leaflet web path, the first leaflet inverting stage being positioned between the pair of printing sections of the first leaflet printing stage along the first leaflet web path such that a first one of the printing sections prints on one page face of the first leaflet web and a second one of the printing sections prints on another page face of the first leaflet web.

23. The apparatus of claim 22 additionally comprising a second leaflet printing stage for printing on the second leaflet web, the second leaflet printing stage including at least a pair of printing sections with each printing section being adapted to print on one of

a pair of opposite page faces of the second leaflet web, and additionally comprising a second leaflet inverting stage for inverting the second leaflet web moving along the second leaflet web path, the second leaflet inverting stage being positioned between the pair of printing sections of the second leaflet printing stage along the second leaflet web path such that a first one of the printing sections prints on one page face of the second leaflet web and a second one of the printing sections prints on another page face of the second leaflet web, the second leaflet inverting stage being located above a second one of the pair of printing sections of the second leaflet printing stage.

24. The apparatus of claim 18 additionally comprising a trimming stage for trimming portions of the base panel web, first leaflet web, second leaflet web, and laminating layer web from the liner web to form a discrete label structure adhered to the liner layer.

25. A method of forming a label structure having a plurality of panels, each of the panels being folded to formed a pair of leaves, each of the leaves having opposite page faces, the method comprising:

providing label structure components including a base panel web, a first leaflet web, a second leaflet web, and a laminating layer web;

folding the first leaflet web to form a first fold in the first leaflet web and folding the second leaflet web to form a second fold in the second leaflet web;

positioning the first leaflet web adjacent to a first side of the base panel web and locating the first fold of the first leaflet web at a first predetermined distance from a first side of the base

panel web;
positioning the second leaflet web adjacent to a first side of the base panel web such that a portion of the first leaflet web is positioned between the second leaflet web and the base panel web and locating the second fold of the second leaflet web at a second predetermined distance from the first side of the base panel web, wherein the first predetermined distance is less than the second predetermined distance such that the first fold line being transversely spaced from the second fold line;
and
applying the laminating layer web to the base panel web, the first leaflet web, and the second leaflet web.

26. A label system comprising:
a liner for removably carrying at least one label structure, the liner being an elongate web, the liner having a longitudinal extent extending along a length of the liner, the liner having front and back faces, the front face of the liner comprising a release surface, a silicone being applied to the release surface, the liner comprising a paper product
a label structure removably applied to the liner, the label structure having a first axis extending substantially parallel to the longitudinal extent of the liner, the label structure having first and second sides extending substantially parallel to the first axis, the label structure comprising:
a base panel for affixing to a surface, the base panel having front and back faces, the back face of the base panel having an adhesive applied thereon for releasably affixing the base panel on the release surface of the liner, the adhesive on the back face of the base panel being removably adhered to the release surface of the

liner, the adhesive on the back face of the base panel comprising a pressure sensitive adhesive, the base panel being substantially opaque, the front face of the base panel having first and second areas, indicia being marked on the first area of the front face of the base panel, indicia being marked on the second area of the front face of the base panel;

a first leaflet being positioned adjacent to the front face of the base panel, the first leaflet being positioned against the front face of the base panel, the first leaflet comprising a first folded panel;

the first folded panel having a first fold, the first fold extending substantially parallel to the first axis of the label structure, the first fold being positioned toward the first side, the first fold dividing the first folded panel into a pair of first leaves, each of the first leaves having an inner page face and an outer page face;

the inner page faces of the first leaves being oriented inwardly toward each other and the outer page faces of the first leaves being oriented outwardly away from each other, the pair of first leaves comprising a front first leaf and a back first leaf, the outer page face of the back first leaf being oriented toward the front face of the base panel, the outer page face of the back first leaf being positioned adjacent to the front face of the base panel, the outer page face of the back first leaf being positioned adjacent to the second area of the front face of the base panel, each of the inner and

outer page faces of the front first leaf and the back first leaf being adapted for permitting viewing of indicia marked thereon;

di { a second leaflet being positioned forward of the first leaflet such that the first leaflet is positioned substantially between the second leaflet and the base panel, the second leaflet being stacked on the first leaflet,

the second leaflet comprising a second folded panel, the second folded panel having a second fold, the second fold extending substantially parallel to the first axis of the label structure, the second fold being positioned toward the second side of the label structure relative to a position of the first fold, the second fold dividing the second folded panel into a pair of second leaves, each of the second leaves having an inner page face and an outer page face;

the inner page faces of the second leaves being oriented inwardly toward each other and the outer page faces of the second leaves being oriented outwardly away from each other, the pair of second leaves comprising a front second leaf and a back second leaf;

the outer page face of the back second leaf being oriented toward the outer page face of the front first leaf;

each of the inner and outer page faces of the front second leaf and the back second leaf being adapted for permitting viewing of indicia marked thereon;

wherein the first fold in the first folded panel defines a first

fold axis and the second fold in the second folded panel defining a second fold axis, the first fold axis being oriented substantially parallel to the second fold axis, the first and second fold axes being oriented substantially parallel to the first axis, the first fold axis being transversely spaced from the second fold axis such that the first fold axis of the first leaflet is located relatively closer to the first side of the label structure than the second fold axis of the second leaflet;

a laminating layer overlying the base panel, the first leaflet, and the second leaflet, the laminating layer having front and back faces, the back face of the laminating layer being adhered to a portion of the base panel, the back face of the laminating layer being adhered to the first area of the front face of the base panel, the back face of the laminating layer being adhered to a portion of the first leaflet and a portion of the second leaflet, the laminating layer being adhered to a portion of the outer page face of the front first leaf of the first folded panel, the laminating layer being adhered to a portion of the outer page face of the front second leaf of the second folded panel, the back face of the laminating layer having an adhesive applied thereto, the laminating layer being substantially transparent.

27. The label structure of claim 1 wherein the first fold is positioned at a distance from the first side of the label structure that is substantially equal to or greater than a distance between the second fold and the first side of the label structure.

28. The label structure of claim 1 wherein the first fold is positioned at a distance from the first side of the label structure

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